

REMARKS

In this Response, Applicants amend claims 1-4, 11, 12, and 16. No new matter has been added. Support for the claim amendments can be found throughout Applicants' specification.

Claims 1-26 are currently pending, of which claims 1, 12, and 16 are independent. Applicants respectfully submit that all of the pending claims are in condition for allowance.

I. Rejection of Claims 1-8, 11-23, and 26 under 35 U.S.C. § 103(a)

Claims 1-8, 11-23, and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over "Real-Time Workshop® User's Guide," January 1999 (hereafter "RTW_UG") in view of U.S. Patent Publication No. 2003/0056195 to Hunt (hereafter "Hunt") (Office Action, page 3). Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection of claims 1-8, 11-23, and 26 for the reasons set forth below.

A. Claim 1

Amended independent claim 1 recites:

"In an electronic device having a graphical modeling and execution environment, said graphical modeling and execution environment including at least one graphical model, a method comprising:

- providing an automatic code generator to create source code that implements functionality of said at least one graphical model and that corresponds to data referenced by said at least one graphical model;
- providing a predefined storage class in said graphical modeling and execution environment, said *predefined storage class specifying a first manner in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment*;
- providing a user interface with a plurality of selectable parameters;
- defining a custom storage class in said graphical modeling and execution environment utilizing parameters selected by a user from said plurality of selectable parameters, said *custom storage class specifying a second manner in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, said second manner differing from said first manner*; and

generating source code implementing said functionality of said at least one graphical model using said automatic code generator, said generating comprising:
using said custom storage class to generate source code corresponding to said data referenced by said at least one graphical model.” [emphasis added]

Applicants respectfully submit that RTW_UG and Hunt, alone or in any reasonable combination, fail to disclose or suggest at least the following features of amended independent claim 1: “predefined storage class specifying **a first manner** in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model ... custom storage class specifying **a second manner** in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, **said second manner differing from said first manner.**” In particular, a combination of RTW_UG and Hunt does not disclose or suggest specifying **two different manners** (i.e. a first manner and a second manner) in which an automatic code generator creates source code for the same data referenced by the same graphical model. Moreover, the combination of RTW_UG and Hunt does not disclose or suggest a custom storage class as claimed.

i. two different manners

As apparent from the claim language reproduced above, claim 1 addresses creating source code corresponding to **data referenced by a graphical model**. More specifically, claim 1 requires a predefined storage class specifying **a first manner** in which an automatic code generator creates source code corresponding to data referenced by a graphical model. In addition, claim 1 requires a custom storage class specifying **a second manner** in which the automatic code generator creates source code corresponding to the same referenced by the same graphical model. This **second manner of creating source code is different from the first manner** of creating source code corresponding to the same data of the same graphical model.

a. RTW_UG

RTW_UG does not disclose or suggest “predefined storage class specifying a **first manner** in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model ... custom storage class specifying a **second manner** in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, **said second manner differing from said first manner,**” as recited in claim 1.

The Examiner acknowledges that RTW_UG does not disclose the following claim language (Office Action, page 3):

“creating a custom storage class in said graphical modeling and execution environment utilizing parameters selected by a user from said plurality of selectable parameters, said custom storage class specifying a second manner in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, said second manner differing from said first manner.”

b. Hunt

Nevertheless, the Examiner asserts that Hunt discloses the claim feature missing from RTW_UG and points to the following in Hunt (Office Action, page 4):

“see Paragraph [0050], “Turning now to FIG. 1, by way of an overview, the user of the code generator 100... of the present invention enters meta-data 102 into the code generator 100’s GUI.”; Paragraph [0083], “Consider now the entry of the meta data used in connection with the present invention. Such information representing the meta data is input via the GUI such as illustrated in FIGS. 2-6.”; Paragraph [0088], “When the user is ready to build the class, the “Generate” button 218 can be selected, for example, by clicking with a mouse.”

Applicants respectfully disagree with the Examiner’s characterization of Hunt.

For example, the disclosure of Hunt does not supplement RTW_UG in such a way as to cure the shortcomings of RTW_UG with respect to “predefined storage class specifying a **first manner** in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model ... custom storage class specifying a **second manner** in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, **said second manner differing from said first manner,**” as recited in claim 1, because Hunt also does not disclose or suggest specifying **two different manners** (i.e. a first manner and a second manner) in which an automatic code generator creates source code for the same data referenced by the same graphical model.

Hunt provides an object repository that contains inter-related objects (Hunt, abstract). Hunt discusses using meta-data for generating object-oriented code for the objects contained in the repository (Hunt, abstract). A user creates meta-data to define an object and its relationships with other objects (Hunt, Figures 8 and 9 and related text, abstract). Source code for the object is then created from the meta-data, in which the source code defines the object and its relationships (Hunt, Figures 8 and 9 and related text, abstract). Thus, Hunt discusses using meta-data associated with an object to specify a **single manner** in which a code generator creates source code for the object.

ii. custom storage class

Hunt also does not disclose or suggest a **custom storage class** specifying a second manner in which an automatic code generator creates source code, as required by claim 1. The Hunt system does not support custom storage classes for creating source code corresponding to the objects in the Hunt repository. Therefore, both RTW_UG and Hunt fail to disclose or suggest a custom storage class specifying a second manner in which an automatic code generator generates source code, as required by claim 1.

For at least the reasons set forth above, Applicants respectfully submit that RTW_UG and Hunt, alone or in any reasonable combination, do not support a 35 U.S.C. § 103(a) rejection of claim 1. Accordingly, Applicants respectfully request reconsideration and withdrawal of the above 35 U.S.C. § 103(a) rejection of claim 1.

B. Claims 2-8 and 11

Claims 2-8 and 11 depend from independent claim 1 and, as such, incorporate all of the elements of claim 1. Accordingly, claims 2-8 and 11 are allowable for at least the reasons set forth above with respect to claim 1. Applicants therefore respectfully request reconsideration and allowance of claims 2-8 and 11.

C. Claim 12

Independent claim 12 recites:

“An electronic device having a modeling and execution environment with at least one graphical model, said electronic device comprising:

a processor for:

providing an automatic code generator to create source code that implements functionality of said at least one graphical model and that corresponds to data referenced by said at least one graphical model,

providing *a predefined storage class specifying a first manner in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model* in said modeling and execution environment,

defining a custom storage class in said modeling and execution environment utilizing parameters selected by a user from a plurality of selectable parameters, said *custom storage class specifying a second manner in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said modeling and execution environment, said second manner differing from said first manner*, and

generating source code implementing said functionality of said at least one graphical model using said automatic code generator, said generating using said custom storage class to generate source code corresponding to said data referenced by said at least one graphical model; and

a display device for:

displaying a user interface with said plurality of selectable parameters for said custom storage class, and

displaying a view of salient aspects of said source code generated by said automatic code generator utilizing said user-selected parameters.” [emphasis added]

Applicants respectfully submit that RTW_UG and Hunt, alone or in any reasonable combination, fail to disclose or suggest at least the following features of amended independent claim 12: “a predefined storage class specifying **a first manner** in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model... custom storage class specifying **a second manner** in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said modeling and execution environment, **said second manner differing from said first manner.**”

For at least the reasons set forth above in connection with claim 1, Applicants respectfully submit that RTW_UG and Hunt, alone or in any reasonable combination, do not support a 35 U.S.C. § 103(a) rejection of claim 12. Accordingly, Applicants respectfully request reconsideration and withdrawal of the above 35 U.S.C. § 103(a) rejection of claim 12.

D. Claims 13-15

Claims 13-15 depend from independent claim 12 and, as such, incorporate all of the elements of claim 12. Accordingly, claims 13-15 are allowable for at least the reasons set forth above with respect to claim 12. Applicants therefore respectfully request reconsideration and allowance of claims 13-15.

E. Claim 16

Independent claim 16 recites:

“A computer-readable medium for use in an electronic device having a graphical modeling and execution environment, said graphical modeling and execution environment including at least one graphical model, said computer-readable medium storing computer-executable instructions for:

- providing an automatic code generator to create source code that implements functionality of said at least one graphical model and that corresponds to data referenced by said at least one graphical model;
- providing a predefined storage class in said graphical modeling and execution environment, said *predefined storage class specifying a first manner in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model* in said graphical modeling and execution environment;

providing a user interface with a plurality of selectable parameters;
defining a custom storage class in said graphical modeling and
execution environment utilizing parameters selected by a user from said
plurality of selectable parameters, said *custom storage class specifying a
second manner in which said automatic code generator creates source
code corresponding to said data referenced by said at least one graphical
model in said graphical modeling and execution environment, said
second manner differing from said first manner*; and
generating source code implementing said functionality of said at
least one graphical model using said automatic code generator, said
generating comprising:
using said custom storage class to generate source code
corresponding to said data referenced by said at least one graphical
model.” [emphasis added]

Applicants respectfully submit that RTW_UG and Hunt, alone or in any reasonable combination, fail to disclose or suggest at least the following features of amended independent claim 16: “predefined storage class specifying **a first manner** in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model... custom storage class specifying **a second manner** in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, **said second manner differing from said first manner.**”

For at least the reasons set forth above in connection with claim 1, Applicants respectfully submit that RTW_UG and Hunt, alone or in any reasonable combination, do not support a 35 U.S.C. § 103(a) rejection of claim 16. Accordingly, Applicants respectfully request reconsideration and withdrawal of the above 35 U.S.C. § 103(a) rejection of claim 16.

F. Claims 17-23 and 26

Claims 17-23 and 26 depend from independent claim 16 and, as such, incorporate all of the elements of claim 16. Accordingly, 17-23 and 26 are allowable for at least the reasons set forth above with respect to claim 16. Applicants therefore respectfully request reconsideration and allowance of claims 17-23 and 26.

II. Rejection of Claims 9, 10, 24, and 25 under 35 U.S.C. § 103(a)

Claims 9, 10, 24, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over RTW_UG in view of Hunt as applied to claims 1 and 16, and further in view of U.S. Patent Publication No. 2003/0225774 to Davidov (hereafter “Davidov”) (Office Action, page 14). Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection of claims 9, 10, 24, and 25 for the reasons set forth below.

RTW_UG, Hunt and Davidov, alone or in any reasonable combination, fail to disclose or suggest each and every feature of claims 9, 10, 24, and 25.

RTW_UG and Hunt have been summarized above.

RTW_UG and Hunt, alone or in any reasonable combination, fail to disclose or suggest each and every feature of independent claim 1 from which claims 9 and 10 depend, and independent claim 16 from which claims 24 and 25 depend. The teachings of Davidov do not supplement RTW_UG and Hunt in such a way as to cure the shortcomings of RTW_UG with respect to the features of independent claims 1 and 16.

Davidov relates to an infrastructure for creating applications for mobile information devices, using a tag-based markup language (Davidov, paragraph [0013]).

Regarding independent claim 1 from which claims 9 and 10 depend, Davidov does not disclose or suggest “predefined storage class specifying **a first manner** in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model ... custom storage class specifying **a second manner** in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, **said second manner differing from said first manner,**” as recited in claim 1. Davidov contains not disclosure or suggestion on specifying two different manners in which an automatic code generator creates source code corresponding to data referenced by a graphical model, as required by claim 1. As such, a combination of RTW_UG, Hunt and Davidov fails to disclose or suggest each and every feature of claims 9 and 10 which depend from claim 1.

Regarding independent claim 16 from which claims 24 and 25 depend, Davidov does not disclose or suggest “predefined storage class specifying **a first manner** in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model... custom storage class specifying **a second manner** in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, **said second manner differing from said first manner,**” as recited in claim 16. Davidov contains not disclosure or suggestion on specifying two different manners in which an automatic code generator creates source code corresponding to data referenced by a graphical model, as required by claim 16. As such, a combination of RTW_UG, Hunt and Davidov fails to disclose or suggest each and every feature of claims 24 and 25 which depend from claim 16.

For at least the reasons set forth above, Applicants respectfully submit that RTW_UG, Hunt and Davidov, alone or in any reasonable combination, do not support a 35 U.S.C. § 103(a) rejection of claims 9, 10, 24, and 25. Accordingly, Applicants respectfully request reconsideration and withdrawal of the above 35 U.S.C. § 103(a) rejection of claims 9, 10, 24, and 25.

CONCLUSION

In view of the foregoing amendments and arguments, Applicants believe that all claims should be passed to issuance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicants' attorney at (617) 227-7400.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-062RCE2. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. § 1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

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